What is claimed is:

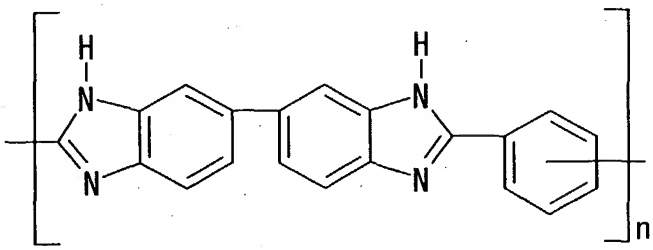
1. A proton conductive solid polymer electrolyte comprising a basic solid polymer as a base material, said base material being impregnated with an acidic inorganic liquid, wherein:

a material, which has at least one lone pair, is dispersed in said base material; and

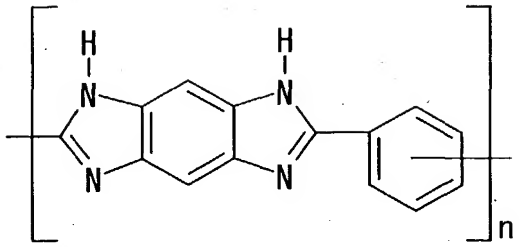
a mole number of said material per gram of said base material is less than 0.0014 mol.

2. The proton conductive solid polymer electrolyte according to claim 1, wherein said solid polymer as said base material is a polymer which has a structural unit of secondary amine monomer.

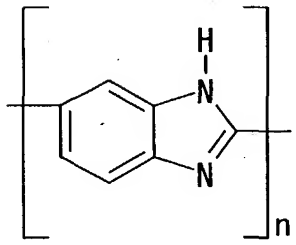
3. The proton conductive solid polymer electrolyte according to claim 2, wherein said polymer, which has said structural unit of said secondary amine monomer, is at least any one of polymers represented by the following chemical formulas (1) to (4):



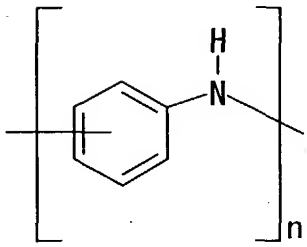
···(1)



···(2)



···(3)



···(4)

4. The proton conductive solid polymer electrolyte according to claim 1, wherein said material is at least any one of a compound having nitrogen-containing heterocyclic compound group, amino group, or imino group, and a nitrogen-containing heterocyclic compound.

5. The proton conductive solid polymer electrolyte according to claim 1, wherein said acidic inorganic liquid

is phosphoric acid or sulfuric acid.

6. The proton conductive solid polymer electrolyte according to claim 1, wherein said mole number of said material per gram of said base material is less than 0.0006 mol.

7. The proton conductive solid polymer electrolyte according to claim 3, wherein said polymer, which has said structural unit of said secondary amine monomer, is polybenzimidazole.

8. The proton conductive solid polymer electrolyte according to claim 4, wherein said material is a compound having said nitrogen-containing heterocyclic compound group.

9. The proton conductive solid polymer electrolyte according to claim 8, wherein said nitrogen-containing heterocyclic compound group is imidazole group, pyrazole group, or pyridine group.

10. The proton conductive solid polymer electrolyte according to claim 9, wherein said compound having said nitrogen-containing heterocyclic compound group is at least any one of polyvinylimidazole, polyvinylpyrazole, and polyvinylpyridine.

11. The proton conductive solid polymer electrolyte according to claim 4, wherein said material is said compound having said imino group.

12. The proton conductive solid polymer electrolyte according to claim 11, wherein said compound having said imino group is polyethyleneimine.

13. The proton conductive solid polymer electrolyte according to claim 4, wherein said material is said nitrogen-containing heterocyclic compound.

14. The proton conductive solid polymer electrolyte according to claim 13, wherein said nitrogen-containing heterocyclic compound is at least any one selected from the group consisting of imidazole, pyrazole, pyridine, diazine, quinoline, isoquinoline, indole, and purine.